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DEVELOPMENT OF THE STATE ROADS COMMISSION OF MARYLAND.

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The State of Maryland made its first move for a State Highway Department when the General Assembly of 1898 passed an act providing for the establishment of a highway division, and appropriated ten thousand dollars annually to be used by the State Geological and Economic Survey in improving the roads. After making investigations, the State Geological and Economic Survey came to the conclusion that the question of intelligent road construction demanded the attention of the people of Maryland more than anything else, and that the money which was spent by the counties (amounting to from three hundred thousand to one million dollars annually) was a decided hindrance to the development of the state. Upon the passage of this Act, data were collected and published concerning the existing conditions and the best methods to be adopted for highway construction. Various tests were made on road materials, and an elaborate system was worked out to be followed in the program. This was done by trained engineers and their assistants. Plans and specifications were prepared to be used for road improvement in various portions of the State.

In 1904 a State Aid Law was drawn up and passed by the General Assembly. This law was to be under the jurisdiction of the State Geological and Economic Survey



and provided two hundred thousand dollars annually for the state to use in connection with highway work. Under this law, the state and county were to cooperate so that the cost should be divided between them. Its restriction was that the plans and specifications and general supervision were to be under the guidance of the state alone.

Even with this State Aid plan, the counties continued building roads at their own expense, as did the state. The road from Washington to Baltimore was built and financed entirely by the state.

A much larger plan of state road construction was taken up in 1908. The foregoing period had been a time of preparatory work, which resulted in the organization of an efficient engineering force, and the construction of many miles of modern roads throughout the state. The State Geological Survey in 1906-07 proposed this broader system in their report when the Geological Survey Commission recommended the following:

"The Commission feels, in view of the widely awakened interest in road matters and the present discussion of proposed legislation for the early improvement of the roads of the State, that it should report the conclusions it has reached as a result of its experience to date in State road construction. These are as follows:

"First. That the early improvement, according to modern methods, of an efficient system of main roads and feeders covering the whole State is desirable from every standpoint.



"Second. That it is not only proper, but good business judgment on the part of the State to provide that the main arteries of this system should be improved and maintained by the State Commission at the expense of the State.

"Third. That the improvement of the remainder of the system should be at the joint expense of the State and the counties.

"Fourth. That the minor roads should be built and maintained by the counties and localities themselves.

"Fifth. That present conditions have shown the importance of many of the turnpikes as sections of the general system. While undoubtedly the operation of these highways has contributed in the past to the development of the State, conditions are rapidly approaching the point where their future existence as toll roads is entirely undesirable. Any legislation looking to the abolishment of the turnpike as toll-roads should recognize the private rights and property values in the turnpikes themselves, and in all cases of assumption by the State or counties of the turnpikes, fair compensation should be made to private interests for the property taken from them.

"Sixth. That any legislation providing for the taking by the State of the turnpikes should allow great discretion to the State Commission to prevent the acquisition of unnecessary property or turnpikes unsuited to the development of a system of market roads. Such legislation should be broad enough to allow the Commission to acquire for the State, for improvement and maintenance, either turnpikes or main roads, as the case might require."

Governor Crothers followed this plan and carried it to a successful issue during the four years of his administration.

The State Roads Commission was organized on



April 30, 1908, at which time the following members were sworn in by Governor Crothers: John M. Tucker, Chairman; Ira Remsen, William Bullock Clark, S. M. Shoemaker, and Francis C. Hutton, together with the Governor ex-officio. A few weeks later, W. W. Crosby, Chief Engineer of the State Geological Survey, was also elected Chief Engineer of the State Roads Commission, an arrangement being made whereby his salary was divided between the two organizations, thus consolidating the management and preventing duplication. The Chief Engineer's first important move was to recommend an engineering department for the joint commission. This plan was adopted and under it were the Division of Construction and the Division of Surveys and Plans with a first and a second assistant engineer respectively.

The work of road construction was entirely transferred from the State Geological Survey to the State Roads Commission on June 1, 1910. Thus the joint commission terminated on that date. The entire cost of the engineering force then fell upon the State Roads Commission, but Mr. Crosby continued as Chief Engineer of the State Geological Survey without salary.

The administration offices of the State Roads Commission were first located in the Union Trust Building.

while the engineering department was located at the Johns Hopkins University. This was at first necessary because of the joint arrangement with the State Geological Survey. After this arrangement was discontinued, the location remained the same because of greater available space and the access to the test laboratory and shop.

In May 1912, Mr. Crosby resigned as Chief Engineer. He was succeeded by H. S. Shirley, who had been Roads Engineer for Baltimore County for eight years.

Shortly after Mr. Shirley took charge as Chief Engineer, a new and important reorganization of the engineering department took place. The construction and maintenance departments had been separate, each covering the whole state. By the new system, the State was divided up into eight geographical sections with a Resident Engineer living in the central part of the Section, who was responsible for all construction, maintenance, and State Aid work in his territory.

As a result of this change, a great saving has been effected, and to enable still greater economy a Purchasing Department was organized similar to that used in large railway corporations.

After being Chief Engineer of the Commission for six years, Mr. Shirley resigned on April 15, 1918. He was succeeded by John N. Mackall, who had been employed



by the Commission in various capacities since 1905, except that for a year and a half prior to his appointment he had been connected with the Pennsylvania State Highway Department.

Just about this time great difficulty with construction and contractors was experienced because of the intervention of the World War. One great hindrance was the drastic Priority Order No. 2. This was passed in 1918, and prohibited the use of open top cars for transportation of materials other than those essential for war work, thus preventing the use of such equipment in the construction of roads. As nearly all trucks used for transporting road materials were of the open top type the contractor was placed under a great handicap.

A great number of contracts had been carried over from 1917 and could not be completed in 1918 on account of this order. When open top cars again became available for use, the price of labor and material had increased considerably. It was necessary that these contracts be completed, but their completion at the original bid would, in a great number of cases, have sent the contractors into bankruptcy. Thus they would have been excluded from bidding on further contracts and the public would have had to wait probably two or three years while the bonding companies completed the work.

Rather than have this occur, the State Roads



Commission decided to increase the contract prices equal to the increase in price of labor, material and freight over those prevailing on the date of Priority Order No.2. These prices were satisfactorily determined in all cases, and as a result every contractor proceeded with his work in the spring of 1919 and had it completed before fall. The Commission felt its action in the matter was fully justified. This is borne out by the fact that several other states followed Maryland's lead in this case, taking similar action either through their highways departments, or through their Legislatures. But Maryland has the distinction of showing the way to the rest.

The great volume of war-time traffic caused several sections of the roads to go to pieces, especially where munitions or other heavy loads were being constantly hauled over them. The width of the Washington-Baltimore Road, originally fourteen feet, was increased to twenty feet by adding a three foot concrete shoulder on each side of the road where the surface was still serviceable, or by making a replacement of twenty foot concrete in such places where the road had failed entirely.

In addition to ordinary maintenance of the roads, the Commission took a step toward reducing the number of accidents occurring annually. It was felt that this could be accomplished by the expenditures of a relatively small amount of money. The first step toward this end



was the whitewashing of all culvert headwalls, telephone poles and similar obstructions in close proximity to the roadway. With this done, travel is much more satisfactory at night, and far safer. Other measures were taken toward safety by relocating some of the more dangerous curves.

In 1920, John N. Mackall was elected to retain his position as Chief Engineer, in addition to the Chairmanship of the new Commission. Shortly afterward an Assistant Chief Engineer and a Secretary were elected.

Prior to 1920, the manner of distributing the funds from the appropriations to the various counties was not specified and none of the counties knew exactly what it was to receive. The Acts of 1920, however, provided not only the amount each county should contribute, but also how much it should receive from the different Road Funds. The County Commissioners of the several counties recommended the type of roads to be built, and in almost every case their recommendations were followed by the Commission. These practices have prevailed down to the present time and have been very satisfactory and much superior to previous methods.

In 1920 the bids given on several sections of road throughout the State were exorbitant and the Commission acted quite contrary to the demands of the people

by refusing to allow the contracts to be awarded under these conditions. Many requests were made for the Commission to build certain sections of road, but the extraordinarily high prices made it feel justified in waiting until a drop should occur. The bids received in that year averaged nearly fifty thousand dollars per mile, whereas the same sections were awarded the following spring at a cost of less than thirty-five thousand dollars per mile. The tendency has since been to have very few projects carried over, so that the contractors are forced to bid lower than otherwise. This policy has culminated in Maryland's having a great number of excellent highways at a much lower cost per mile than almost every other state.

Mr. Mackall has continued as Chief Engineer and Chairman of the Commission. Through his tireless efforts, as well as the rest of the Commission's, and the hearty cooperation of the County Commissioners in the selection of roads, Maryland has come to be recognized as having some of the best roads in the country.



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